Classify and describe basic forms of real estate investments.

There are four basic forms of real estate investment; private equity (direct ownership), publicly traded equity (indirect ownership), private debt (direct mortgage lending), and publicly traded debt (mortgage-backed securities).

Describe the characteristics, the classification, and basic segments of real estate.

Real estate investments are heterogeneous, have high unit values, have high transaction costs, depreciate over time, are influenced by the cost and availability of debt capital, are illiquid, and are difficult to value.

Real estate is commonly classified as residential and non-residential. Income-producing properties (including income-producing residential properties) are considered commercial real estate.

Explain the role in a portfolio, economic value determinants, investment characteristics, and principal risks of private real estate.

Reasons to invest in real estate include current income, capital appreciation, inflation hedge, diversification, and tax benefits.

Risks include changing business conditions, long lead times to develop property, cost and availability of capital, unexpected inflation, demographic factors, illiquidity, environmental issues, property management expertise, and the effects of leverage.

Real estate is less than perfectly correlated with the returns of stocks and bonds; thus, adding real estate to a portfolio can reduce risk relative to the expected return.

Describe commercial property types, including their distinctive investment characteristics.

Commercial property types, and the demand for each is driven by:

- Office—Job growth
- Industrial—The overall economy
- Retail—Consumer spending
- Multi-family—Population growth

Compare the income, cost, and sales comparison approaches to valuing real estate properties.

Cost approach. Value is derived by adding the value of the land to the replacement cost of a new building less adjustments for estimated depreciation and obsolescence.

Sales comparison approach. The sale prices of similar (comparable) properties are adjusted for differences with the subject property.

Income approach. Value is equal to the present value of the subject's future cash flows over the holding period.

Estimate and interpret the inputs (for example, net operating income, capitalization rate, and discount rate) to the direct capitalization and discounted cash flow valuation methods.

NOI is equal to potential gross income (rental income fully leased plus other income) less vacancy and collection losses and operating expenses.

The cap rate, discount rate, and growth rate are linked.

cap rate = discount rate (r) – growth rate (g)

If the cap rate is unknown, it can be derived from recent comparable transactions as follows:

$$\text{cap rate} = \frac{\text{NOI}_1}{\text{comparable sales price}}$$

The discount rate is the required rate of return of the investor.

discount rate = cap rate + growth rate

Calculate the value of a property using the direct capitalization and discounted cash flow valuation methods.

Direct capitalization method:

$$\text{value} = V_0 = \frac{\text{NOI}_1}{\text{cap rate}}$$

Discounted cash flow method:

Step 1: Forecast the terminal value at the end of the holding period (use direct capitalization method if NOI growth is constant).

Step 2: Discount the NOI over the holding period and the terminal value to present.

Compare the direct capitalization and discounted cash flow valuation methods.

Under the direct capitalization method, a cap rate is applied to first-year NOI. Implicit in the cap rate is an expected increase in growth.

Under the DCF method, the future cash flows, including the capital expenditures and terminal value, are projected over the holding period and discounted to present at the discount rate. Future growth of NOI is explicit to the DCF method. Choosing the appropriate discount rate and terminal cap rate are crucial as small differences in the rates can significantly affect value.

Calculate the value of a property using the cost and sales comparison approaches.

Steps involved with applying the cost approach.

Step 1: Estimate the market value of the land.

Step 2: Estimate the building's replacement cost.

Step 3: Deduct physical deterioration (estimate incurable using effective age/economic life ratio), functional obsolescence, locational obsolescence, and economic obsolescence.

With the sales comparison approach, the sales prices of similar (comparable) properties are adjusted for differences with the subject property. The differences may relate to size, age, location, property condition, and market conditions at the time of sale. Once the adjustments are made, the adjusted sales price per square foot of the comparable transactions are averaged and applied to the subject property.

Describe due diligence in private equity real estate investment.

Investors perform due diligence to confirm the facts and conditions that might affect the value of the transaction. Due diligence can be costly, but it lowers risk of unexpected legal and physical problems. Due diligence involves reviewing leases, confirming expenses, performing inspections, surveying the property, examining legal documents, and verifying compliance.

